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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,193	01/05/2006	Geir Jensen	05163	3947
23338	7590	06/14/2007	EXAMINER	
DENNISON, SCHULTZ & MACDONALD			MAYO III, WILLIAM H	
1727 KING STREET			ART UNIT	PAPER NUMBER
SUITE 105			2831	
ALEXANDRIA, VA 22314			MAIL DATE	DELIVERY MODE
			06/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/561,193	JENSEN, GEIR
	Examiner	Art Unit
	William H. Mayo III	2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14, 16, 17 and 22 is/are rejected.
- 7) Claim(s) 15 and 18-21 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 December 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/16/05</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in PCT National Application No. PCT/NO04/00214, filed on July 9, 2004.

Information Disclosure Statement

2. The information disclosure statement filed December 16, 2005 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Drawings

3. The drawings are objected to because Figures 1-4 lack the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductor and insulative materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the

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amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because in lines 9-10, the abstract contains the terms "A connector system for string device is described", which is improper language for the abstract. The applicant should delete the terms "is described" to provide the abstract with proper language. Correction is required. See MPEP § 608.01(b).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

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As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

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- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is

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necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing: See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

6. The disclosure is objected to because of the following informalities:
7. The specification is also objected because throughout the specification, the applicant has phrases like "....a string shaped device as per claim 1", which is improper form for the specification. The applicant is reminded that the claims are enabled by the specification and not vice versa. The applicant should delete the above phrases and all

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of the similar phrases and specifically state what material the applicant is trying to specify.

8. Also, the specification lacks the proper headings are disclosed above. The applicant should insert the proper headings to provide the specification with clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 12 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 12 recites the broad recitation "core having 3-8 tracks", and the claim also recites "preferably 5 tracks", which is the narrower statement of the range/limitation.

12. Claim 16 recites the limitation "optical fiber or nano fiber" in line 4, which is confusing and renders the claim indefinite. It is unclear because the applicant in the claim in which claim 16 depends, states the "provide a signal or current connection with one or more conductors of the string device" and then in claim 16 refers to "optical fiber or nano fiber" rather than "conductors". If the applicant is referring to the previous mentioned term, then he/she should recite the term with consistency. If the applicant is referring to a new transmission media, then he/she should make the term more distinguishable and provide proper antecedent basis for such language.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-4, 7-9, 11-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Robillot (Pat Num 1,008,370). Robillot discloses an string device (Figs 1-5) incorporated with means for the transfer of communication signals in the application of monitoring, control, communication, detection, and power distribution (Col 1, lines 8-

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38). Specifically, with respect to claim 1, Robillot discloses an string device (Figs 1-5) comprising a passive structural core element (p) and an active longitudinal element (a, b), which is an conducting material capable of power and signal transfer (Col 1-2, lines 48-52 & 53-65), wherein the longitudinal element (a, b) is positioned at the outer surface of the core (p), wherein it is accessible for external contacts (Col 2, lines 53-65). With respect to claim 2, Robillot discloses that the longitudinal active element (a, b) is a conductor (Col 1, lines 48-52) positioned in at least one longitudinal slit (m, n, o), wherein the slit (m, n, o) is accessible from the outer surface of the string device (Cols 1-2, lines 48-52 & 53-65). With respect to claim 3, Robillot discloses that the conductor (a, b) is an insulated wire (Col 1, lines 48-52). With respect to claim 4, Robillot discloses that the string device (Figs 1-5) may be utilizes as a heat detector (Col 1, lines 8-12), wherein the core (p) consist of a metallic material (Col 3, lines 9-12), which is not structurally challenged by surrounding temperatures up to a range above a set threshold temperature, and contains a wire (a, b) of conducting material (i.e. copper, Col 3, lines 4-5), which breaks at a set threshold temperature (i.e. the insulation is removed when the heat of the fire escalates, thereby causing the conductors (a, b) to contact each other, Col 2, lines 53-65). With respect to claim 7, Robillot discloses that the core (p) provides conduits (m, n, o) for the insertion of wires (a, b) in each conduits (m, n, o). With respect to claim 8, Robillot discloses that the conduits (m, n, o) are C-shaped gaps (m, n, o) which are capable of being widen for the insertion of wires (a, b) in the conduits (m, n, o). With respect to claim 9, Robillot discloses a track (m, n, o) at the outer surface of the core (p) for indication and positioning when connecting (Col 3, lines

18-32). With respect to claim 11, Robillot discloses that the core (p) is circular and has longitudinal tracks (m, n, o) are arranged at the perimeter (Fig 4). With respect to claim 12, Robillot discloses that the core (p) has 3 tracks (Fig 4). With respect to claim 13, Robillot discloses that the string device (Fig 4) is provide with an outer insulating sheath (Col 3, lines 14-17). With respect to claim 14, Robillot discloses a connector system (Fig 1) for the string device, wherein at least one receptacle comprising contacts at the inner surface of the receptacle (connection of conductors to the indicator (d) has to have contacts), wherein the receptacle (not shown) is connected to the string device (Fig 1) to provide a signal connection with one or more conductors (a, b) of the string device (Fig 1). With respect to claim 16, Robillot discloses that the receptacle (d) is a receiver, that communicates with the conductors (a, b) of the string device (Fig 1).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claims 5-6, 10, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robillot (Pat Num 1,008,370) in view of Applicant's Own Admission of Prior Art (herein referred to as AOAPA). Robillot discloses an string device (Figs 1-5) incorporated with means for the transfer of communication signals in the application of monitoring, control, communication, detection, and power distribution (Col 1, lines 8-38) as disclosed above with respect to claims 1, 7, and 14.

However, Robillot doesn't necessarily disclose conductor material being a low melting alloy, such as Woods metal, other alloys, polymers, or optical fibers which discontinue the signal flow (claim 5), nor the two or more longitudinal ribbons are arranged separate conducting tracks (claim 6), nor the core being ribbon shaped with), longitudinal tracks (claim 10), nor the receptacle being round (claim 17), nor the receptacle being designed to contact the conductors of the string device by a crimping tool (claim 22).

AOAPA teaches various string device (see Background) for performing a means for transfer of signals relating to monitoring, control, communication, detection, measurement, and transport of energy (Page 1, lines 5-10). Specifically, with respect to claim 5, AOAPA teaches various known ribbon devices, such as those assigned to Peltier (Pat Num 3,297,846) which teaches having an electrical insulating material that disintegrates by heating, thereby breaking the electrical flow of the current in the electrically conducting particles of silver or other material embedded into the insulating material (Page 1, lines 19-22) and Kristiansen (NO 20001295), which teaching utilizing

a meltable metal such as tin, as the electrical conductor for fire detection. With respect to claims 6 & 10, AOAPA teaches a known ribbon device, such as the one assigned to Wheeler (Pat Num 1,957,565), wherein the meltable wire is incorporated into a woven sheath (i.e. grooves) to provide detection of fire (Page 1, lines 13-19). With respect to claim 10, AOAPA teaches that tools, such as crimping tools, are commonly utilized to terminate conductors (Page 2, lines 13-15).

With respect to claims 5-6 and 10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulated wire of Robillot to comprise the ribbon cable having a meltable material as a conductor configuration as taught by AOAPA et al because AOAPA teaches that such a configuration are known and commercially available for transfer of signals relating to monitoring, control, communication, detection, measurement, and transport of energy (Page 1, lines 5-10).

With respect to claim 17, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the receptacle of Robillot to comprise a round configuration, since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

With respect to claim 22, it would have been an obvious matter of design choice to modify receptacle of Robillot to be attached by a crimping tool, since it is well known that crimping tools are commonly utilized to terminate conductors and since the

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applicant has not disclosed that such a modification solves any stated problems or is for any particular purpose and it appears that Robillot would perform equally well with the modification.

Allowable Subject Matter

18. Claims 15, 18-19, and 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Ekberg et al (Pat Num 6,943,300), Loktev et al (Pat Num 6,353,707), Jacoby (Pat Num 2,941,176), Hirose (Pat Num 3,683,309), McNab (GB 2276766), and Su (Pat Num 5,978,549), all of which disclose various cables.

Communication

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
June 5, 2007

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